



DEPARTMENT OF FORESTRY AND FIRE PROTECTION

P.O. Box 944246
SACRAMENTO, CA 94244-2460
(916) 653-7772
Website: www.fire.ca.gov



December 15, 2010

Mary Nichols, Chairman
Air Resources Board
1001 I Street
Sacramento, California 95814

Re: Comments on Proposed Cap and Trade Program for AB 32

Dear Chairman Nichols:

The Department of Forestry and Fire Protection (CAL FIRE) appreciates the opportunity to comment on the Air Resources Board's (ARB) proposed cap-and-trade program regulations. Our comments focus on forestry offset provisions and treatment of biogenic emissions from forest biomass, including suggestions for further clarification or program developments that could enhance the contribution of the forest sector to the cap and trade program.

CAL FIRE has been working on forestry climate change issues for nearly a decade, including collaboration with ARB, California Environmental Protection Agency (CalEPA), California Energy Commission (CEC), the Climate Action Registry (now the Climate Reserve) and others on the development of GHG inventories, forest carbon protocols, and forest sector mitigation strategies. We have worked closely with CalEPA and ARB on the development of forest sector mitigation strategies, and with the California Natural Resources Agency (CNRA) on climate adaptation policy. CAL FIRE is also working with ARB, CEC, the U.S. Forest Service and others on the Interagency Forest Working Group to consider life cycle effects of forest management practices on CO2 emissions and sequestration, and to improve the methodology for estimating and tracking forest sector emissions.

Support for Urban Forest and Forest Management Project Protocols

CAL FIRE supports ARB's decision to include the Urban Forest project and Forest Management project protocols for determining eligible emissions offsets under the Cap and Trade program. CAL FIRE worked on the first set of protocols (Version 1) which was developed in response to Senate Bill 812 (Sher, Statutes of 2002) and also participated in the recent two year, multi-stakeholder process, led by Climate Action Registry at the request of ARB, to improve the protocols and make them available for use by more entities.

CAL FIRE supports the inclusion of forest carbon offset projects that produce GHG benefits to the atmosphere. The protocols, as proposed, provide detailed methodologies for estimating carbon sequestration and avoided emission credits that are real, additional, permanent, verifiable, enforceable and quantifiable.

Projects Should Focus on CO2 Benefits

CAL FIRE believes that the primary criteria for any offset project should be the demonstration of additionally, i.e. surplus CO2 sequestration or reductions above what would have occurred without the project. The Forest Management protocol provides for three types of projects: avoided conversion, reforestation and improved forest management. Improved forest management projects may employ various silvicultural systems, so long as they demonstrate sustainable harvesting practices, natural forest management and additionally. As stated above, this protocol was developed and vetted by a multi-stakeholder group over a two year process.

ARB should not pick winners and losers among forest offset projects based on criteria outside the scope of AB 32, i.e. the offsets should focus on GHG reduction goals. Forest projects that include timber harvesting are already subject to regulation developed by the Board of Forestry and Fire Protection (BOF) and administered by CAL FIRE to protect soils, watersheds and water quality, wildlife and habitats, riparian and lake zones, forest health including pests and disease, and other environmental values. The regulations also require that timber harvest permits demonstrate maximum sustained productivity, i.e. that the volume of timber harvested does not exceed the amount grown over a 100 year period.

Use of Registered Professional Foresters for Forest Project Verification

CAL FIRE supports the U.S. Forest Projects Offset Protocol requirement that each verification team include at least one Registered Professional Forester (RPF) who takes an active role in reviewing the forest carbon inventory program and conducting site visits (Staff Report, Part V, Section 10, p 71). Verification of forest project conditions and carbon accounting will require a high level of forest mensuration expertise, analytical experience, and familiarity with forest management regulations and practices. RPFs are licensed by the BOF's Professional Forest Examining Committee to ensure that they have the qualifications and expertise necessary to protect the State's interest in appropriate forest management and to protect those who require the services of a forester.

Public Lands Eligibility and the U.S. Forest Service

CAL FIRE supports the addition of public land project eligibility introduced in Version 2 of the Forest Project protocol, however we suggest adding language that clearly allows for future consideration of forest offset projects on federal lands. The U.S. Forest Service owns about 12 million acres, or over half, of conifer forest and woodlands in California. Approximately 261,000 acres burned into a deforested condition between 2000 and 2009 (Landram, personal communication, 2010). While about 125,000 acres have been planted, funding to restore these lands to forests has not kept pace with the level of

disturbance. This has generated a backlog of reforestation needs that are not currently being met. Climate research studies project significant increases in acreage affected by these types of disturbances in future decades. Thus, there is enormous need and potential for reforestation on these lands.

CAL FIRE appreciates the policy and legal complexities of developing carbon offset projects and binding agreements with the State on federal lands. We also understand that the U.S. Forest Service is evaluating their policies in this regard.

In order, however, to avoid losing future opportunities for increasing GHG sequestration through reforestation and forest improvement, especially in the event of climate impacts to forests, we suggest that ARB include a specific placeholder, similar to the language in Version 3.0 which says, "Forest projects on federal lands may be eligible if and when their eligibility is approved through a federal legislative or regulatory/rulemaking process."

Allowance Obligation Exemptions for Biomass

CAL FIRE supports Sections 95852.1 and 9582.2 addressing biomass-derived fuel emissions. These sections require reporting of all biomass-derived fuel emissions but exempt certain activities and conditions from allowance obligations, including wood and wood wastes generated from timber harvests permitted under the FPA, fuel reduction purposes, and stand improvement activities, so long as the emissions are documented and verified.

CAL FIRE supports the sustainable utilization of forest wood waste for bioenergy production as a means of encouraging forest health treatments and contributing to California's renewable energy goals to reduce fossil fuel consumption through biomass energy generation. It is recognized that combustion of these materials results in emissions of CO₂. However, if this material is left to decay in the forest, CO₂ emissions associated with the decay processes will also occur. To the extent that use of these materials can offset the need for energy derived from fossil fuels, there will be a net public benefit to encouraging greater utilization of forest based biomass. Additionally, as long as forest management activities provide sustainable levels of sequestration in forested landscapes, much of the CO₂ emitted through biomass combustion will be sequestered through growth of trees on site and those remaining on the landscape.

California utilizes about 2 million bone dry tons (BDT) of forest biomass for bioenergy generation (California Biomass Collaborative 2006), contributing less than 1% of the state's total electricity (California Energy Commission, 2010). This material constitutes one tenth of one percent of the 2.2 billion BDT of standing forest biomass (Christensen et al., 2008).

Currently the primary source of forestry related woody biomass used for bioenergy is wood waste generated through milling operations. Other sources include agricultural residue, urban wood waste, and forest woody biomass. It is also recognized that fuel reduction and stand improvement treatments could provide more in forest woody biomass supply.

These activities are high priorities for the California Climate Adaptation Plan (CNRA, 2009) because they help restore resilient forest stand conditions that can adapt to climate change effects. They also are high priority for protecting communities, increasing fire fighter safety, and reducing environmental impacts from wildfires (California Fire Plan, CAL FIRE and BOF, 2010). Fuel reduction activities are already legally required around homes under Public Resources Code 4290, and have been the focus of recent state and federal grant programs in the wildland urban interface.

It is estimated that about 14 million bone dry tons of forest biomass (BDT) are 'technically' available for bioenergy utilization, i.e. available subject to silvicultural standards and guidelines, technological constraints, ecological considerations, land use restrictions on management and utilization, and social and political considerations. This appears to be sustainable, given annual timber stock growth rates of 2% per year (FRAP 2003).

Fuel reduction is very costly, however, and there is not enough funding to meet goals on private and federal lands. Additional biomass utilization opportunities could help underwrite management costs. In a recent analysis of how 22 existing biomass plants that use forest wood waste could support ecosystem restoration and community safety, CAL FIRE found that only 22% of high priority ecosystem restoration sites and 14% of high priority community areas were within 25 miles of these plants (i.e. the cost-effective distance for transporting waste materials) (CAL FIRE, 2010).

The CEC funded research paper, Biomass to Energy: Forest Management for Wildfire Reduction, Energy Production, and Other Benefits (USFS, 2009), modeled 40-year life cycle costs and benefits of generating electricity from forest thinnings. The study found a 65 percent net reduction in GHG emissions.

Given the State's forest management goals for reducing fire hazards, the protection provided by the California's Forest Practices Act, and current biomass utilization rates, forest growth rates, biomass infrastructure, and economics, CAL FIRE supports the proposed regulation exempting allowance obligations for forest wood-waste energy emissions as a starting point. CAL FIRE does, however, support the development of a more robust framework for determining and tracking biomass activities and their on-the-ground effects to ensure that they are sustainable in future decades and help us achieve our forest protection goals. CAL FIRE recently offered to work on this with stakeholder groups and agencies so that we may move forward with appropriate biomass utilization activities.

Potential Roles for CAL FIRE and Board of Forestry

There are several provisions in the proposed regulations or protocol provisions that may require support by CAL FIRE or warrant further exploration with the Board of Forestry and Fire Protection. CAL FIRE suggests clarification or incorporating into the regulation language that directs or allows ARB to work with CAL FIRE and the Board of Forestry and Fire Protection to address these needs.

Approval for Harvest in Reforestation Projects to Reduce Disease Threats

Section 2.1.1 of the Forest Project protocol on Reforestation projects ((Staff Report, Part V, p. 9) requires that trees can only be harvested within the first 30 years of a reforestation project if it is needed to prevent or reduce an imminent threat of disease. Such harvesting could only occur if "the government agency in charge of forestry regulation in the state where the project is located stipulating that the harvesting is necessary to prevent or mitigate disease on reversals."

CAL FIRE regulates timber harvest on commercial forestland for commercial purposes, requiring Timber Harvest Plans. Other tree removals for fuels reduction and forest health may be conducted under ministerial permits for exemptions and emergencies. For example, CCR Section §1038(b) allows harvesting of dead, dying or diseased trees of up to a maximum of 10% average volume per acre; more than that would require a THP. If, however, a project's trees will not be used for commercial purposes (i.e. they still be too small), it would not require either ministerial nor discretionary permits of any type (this is similar to pre-commercial thinning which is typically done by landowners to improve stand growth).

Thus, it is not clear that existing CAL FIRE permitting actions will meet ARB needs and the intention of this section of the Forest Project protocol, nor that the Board of Forestry has authority to address this issue. CAL FIRE suggests that ARB consult with CAL FIRE and with the Board of Forestry to discuss the adequacy of existing permitting activities, and, if needed, alternatives such as non-regulatory CAL FIRE assistance to operators and the Cap and Trade Program or additional BOF authority for other measures.

Development of Additional Offset Projects

The Initial Statement of Reasons (Staff Report, Part I) discusses the potential need for ARB to work with developers to increase the supply of offset projects. It is not clear how ARB will do this, though we presume they would use future auction revenues.

CAL FIRE, as the state agency responsible for the protection and improvement of forest land resources, has authority and programs for grant, cost-share and assistance activities related to reforestation, forest improvement and forestland conservation. These include the California Forest Improvement Program (CFIP), the Forest Legacy Program and the Vegetation Management Program.

CAL FIRE suggests that the regulations include enabling language for working with and providing funding from auction revenues, as appropriate, to CAL FIRE which already has expertise, experience and program authorities for working with stakeholders and forest landowners. These resources could be used to incentivize the development of additional forest offset projects.

If public funds were used, it might be appropriate to retire those credits, rather than trade them, or to consider their use completely outside the Cap and Trade program. If auction revenues are used to fund grant or cost-share programs that produce carbon offset projects on private lands, it may be appropriate to pro-rate the number of credits that the operator can sell to reflect the proportion of private funds used to develop the project.

Role of BOF in Certifying the Verifiers

The proposed regulations give ARB authority to certify offset project verification entities. Since the protocols require that verification teams include at least one Registered Professional Forester (RPF) to review the project and conduct field visits, it is important that RPFs have the necessary knowledge and skills for properly translating forest measurements and models into carbon accounting. This may require training or warrant consideration of a specialty under the RPF license, which BOF has the authority to do. CAL FIRE suggests that ARB discuss the needs, opportunities, and potential role of the BOF to support ARB in implementing its certification responsibilities, and that the draft regulations be amended to explicitly call for collaboration, as needed, with other responsible licensing agencies.

If you have any questions or concerns, you may contact me at (916) 653-4298.

Sincerely,

William E. Snyder
Deputy Director
Resource Management

References

Board of Forestry and Fire Protection and the California (BOF) and the Department of Forestry and Fire Protection (CAL FIRE). 2010. The 2010 Strategic Fire Plan for California. 20 pp.
http://www.bof.fire.ca.gov/board_committees/resource_protection_committee/current_projects/resources/2010_fire_plan_1-27-10version.pdf

California Biomass Collaborative. 2006. A Preliminary Roadmap for the Development of Biomass in California. California Energy Commission, PIER Program. CEC-500-095-D. 134 pp. <http://www.energy.ca.gov/2006publications/CEC-500-2006-095/CEC-500-2006-095-D.PDF>

California Biomass Collaborative. 2008. DRAFT - An Assessment of Biomass Resources in California, 2007. California Energy Commission, PIER Program. 130 pp.
[http://biomass.ucdavis.edu/materials/reports%20and%20publications/2008/CBC Biomass Resources 2007.pdf](http://biomass.ucdavis.edu/materials/reports%20and%20publications/2008/CBC_Biomass_Resources_2007.pdf)

California Department of Forestry and Fire Protection (CAL FIRE). 2010. California's Forests and Rangelands: 2010 Assessment. June 2010. CAL FIRE Fire and Resource Assessment Program. <http://frap.fire.ca.gov/assessment2010.html>

California Department of Forestry and Fire Protection (CDF). 2003. Changing California: Forest and Range 2003 Assessment. Fire and Resource Assessment Program. 197 pp.
http://www.frap.fire.ca.gov/assessment2003/Assessment_Summary/assessment_summary.html

California Energy Commission. 2010. Draft Renewable Energy Program 2010 Annual Report to Legislature.

California Natural Resources Agency. 2009. 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008. 197 pp. <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

Christensen, Glenn A.; Campbell, Sally J.; Fried, Jeremy S., tech. eds. 2008. California's forest resources, 2001–2005: five-year Forest Inventory and Analysis report. Gen. Tech. Rep. PNW-GTR-763. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 183 pp.
<http://www.fs.fed.us/pnw/publications/gtr763/pnw-gtr763a.pdf>

Landram, Michael. U.S. Forest Service. Personal communication, December 2010. Also see: <http://www.fs.fed.us/r5/rsi/projects/postfirecondition/>

USDA Forest Service, Pacific Southwest Research Station. 2009. Biomass to Energy: Forest Management for Wildfire Reduction, Energy Production, and Other Benefits. California Energy Commission, Public Interest Energy Research (PIER) Program. CEC-500-2009-080. <http://www.energy.ca.gov/2009publications/CEC-500-2009-080/CEC-500-2009-080.PDF>